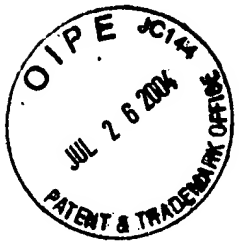

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	James J. Crow, Dennis L. Parker		
Assignee:	Motive, Inc.		
Title:	DISTRIBUTED SERVICES ARCHITECTURE THROUGH USE OF A DYNAMIC SERVICE POINT MAP		
Serial No.:	09/542,273	Filed:	April 4, 2000
Examiner:	L. Wang	Group Art Unit:	2155
Docket No.:	MTV0016US		

Austin, Texas
July 19, 2004

COMMISSIONER FOR PATENTS
P. O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF PRIOR INVENTION IN THE UNITED STATES PURSUANT TO 37 C.F.R. § 1.131

Dear Sir:

PURPOSE OF THE DECLARATION

Claims 1-3, 5, 9, 13 and 15-25 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,951,694 issued to Choquier et al. (Choquier) in view of Kurashima et al. (Kurashima), U.S. Patent No. 6,694,350. Claims 4, 6-8, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choquier in view of Kurashima in combination with other references. The effective date of Kurashima is June 18, 1999.

PATENT

DECLARATION

I, James J. Crow, declare as follows:

1. I am an inventor of the claimed subject matter of the above-referenced application.

2. Attached is Exhibit A. Exhibit A includes two (2) sheets describing a distributed services architecture in a client/server system through the use of a dynamic service point map that we invented. This document was used as the basis for the above-referenced application. The date on the document of Exhibit A has been removed. The removed date, however, is before June 18, 1999.

3. Exhibit A shows a communication network comprising a plurality of server devices for providing a plurality of services to the network, where each service of the plurality of services has a corresponding service address, and a client device configured to access a service by accessing a service point map on the client device to obtain the corresponding service address for the service.

4. Exhibit A establishes our invention of the subject matter set forth in independent claims 1, 13, 20 and 23 prior to the effective date of Kurashima.

5. The inventive concepts shown in Exhibit A were conceived by Dennis L. Parker and me.

6. All of the enumerated acts took place in the United States of America.

****

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the Application or any patent issued thereon.

Full Name of Inventor: James J. Crow

Inventor's Signature: 

Date: July 19, 2004

Country of Citizenship: U.S.A.

Residence: 11301 Monet Drive
Austin, Texas 78726

EXHIBIT A

Distributed Services Architecture in a Client-Server System Through the Use of a Dynamic Service Point Map

James J. Crow
Dennis L. Parker
BroadJump, Inc.

In a large scale client and server based computer system, there is a need for dynamic distribution and location of the services and the associated server machines. The large volume and unpredictable nature of the client activity within this network compound this problem. The following method describes a method of managing and presenting the service locations to the individual clients that solves this set of problems.

The concept of the Service Point Map (SPM) is defined as the basic unit of communication used to notify client machines as to the location of individual service machines within the network. The content of the SPM is dynamic and may be tiered to allow extension of the basic functionality. As services are brought on-line within the system, they notify the SPM manager machine as to their physical location within the network. All service and location specific information such as network address, network port number, service identifier, service version, and the service epoch (defined below) value are supplied to the SPM manager. This information is collected into a set of Service Point Map records which indicate the current status of the various services. This process is indicated in the **Diagram A** below.

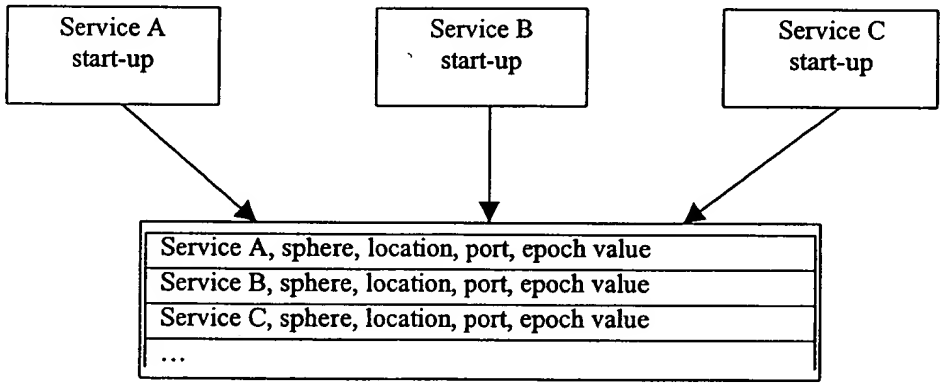

Diagram A, Building the Service Point Map

The services are free to move across machines within the network as well as exist as duplicate services on an arbitrary number of machines. The duty of the SPM manager is to collect the information from all active services within the network and maintain the current content of the SPM based on this information.

When a client connects to an SPM managed network, it requests a copy of the "level-1" or "top-level" SPM from the SPM manager. This SPM copy may be a duplicate of the SPM level-1 map or may be a customized or altered version that reflects the intended usage of the services by the client. The client then uses information within the supplied SPM to gain access to the services by service id, location and epoch number. This state transition is detailed in **Diagram B** below.

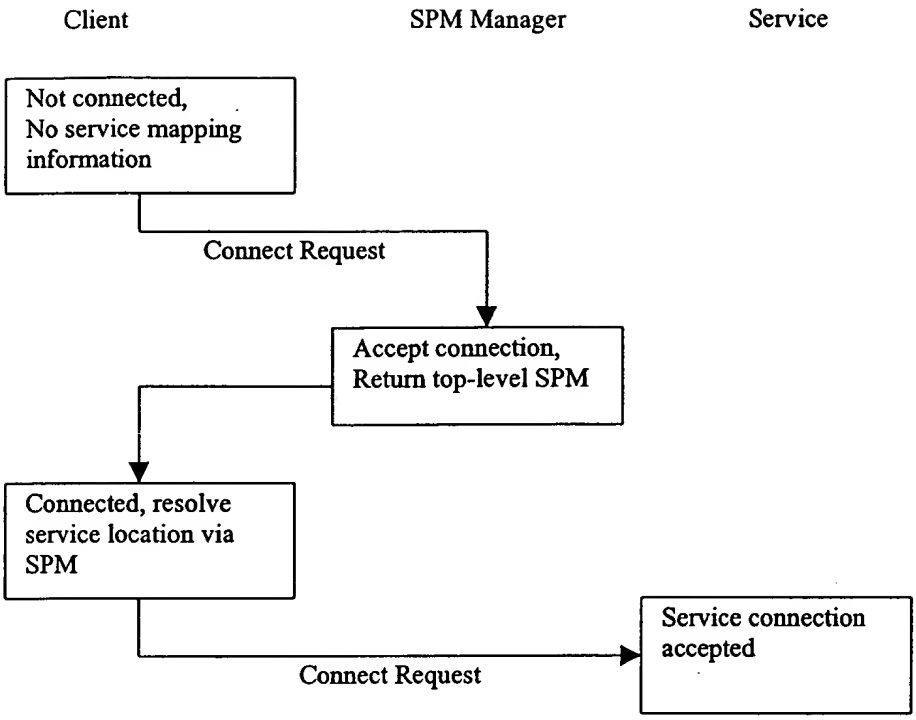

Diagram B, Client Connection and Service Location Method

The Service Point Map also contains information that categorizes a service's sphere of influence. This allows parallel or even duplicate services to exist within a single network but be logically separated and therefore partitioned for discreet use. This also allows for segmentation of services across arbitrary boundaries. A single SPM may specify services that exist across disparate and perhaps geographically separate networks but are aggregated into what appears to be a homogeneous service offering.

The service epoch number is used to synchronize the client's expected level of service with the dynamic service offering within a given service. As the current service mapping changes, the SPM manager is made aware of these changes by the services themselves and the epoch number within the SPM is altered to reflect this change. Clients include the expected epoch number in the requests that they send to a specific service. A mismatch between the client expected epoch number and the current SPM value will be sensed and serve as stimulus for altered client behavior. This behavior is arbitrary but could be as simple as the indication that the service network topology has changed and the client should request an updated version of the SPM.

Multiple forms of the SPM are defined and may be used to add efficiency to the process of grouping services within differing levels of scale. Beneath the level-1 SPM, there may logically exist an arbitrary number of sublevels that contain groupings of like services. The client may access the service by specifying one of these individual service machines according to a rule-based method. This allows for rule-based load balancing or data distribution algorithms to be defined and accomplished without an associated processing overhead by the service machine(s).